Surveillance Monitoring Fact Sheet

San Jose/Santa Clara Water Pollution Control Plant

www.sanjoseca.gov/esd

THINGS TO REMEMBER

- ***Surveillance monitoring is Source Control's ongoing sewer monitoring program***
- ***Sampling results from surveillance monitoring are enforceable.***
- ***A business may be subject to surveillance monitoring at any time***
- ***Some violations can be prevented with a more thorough self-inspection process***
- ***Surveillance monitoring is used to verify accuracy of mass loadings and as an enforcement tool***

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The **San Jose/Santa Clara Water Pollution Control Plant** serves the cities of San José, Santa Clara, Milpitas, Cupertino Sanitary District, West Valley Sanitation District (including Campbell, Los Gatos, Monte Sereno, Saratoga), County Sanitation Districts 2-3, Sunol & Burbank Sanitary Districts

Surveillance monitoring, sometimes referred to as discrete monitoring or sewer sampling, is an ongoing monitoring program that evaluates pollutants found within the sanitary sewer.

Why Surveillance Monitoring?

Federal regulations [40 CFR 403.8: Pretreatment Program Requirements: Development and Implementation by POTW; parts (f)(2) (v) and (vi)] state *"…Randomly sample and analyze the effluent from industrial users and conduct surveillance activities in order to identify, independent of information supplied by industrial users, occasional and continuing noncompliance with pretreatment standards…"*

The City's Source Control Program uses the Surveillance Monitoring Program to periodically verify the accuracy of an Industrial User's discharge data by sampling at an alternate sample point. Surveillance monitoring is also used to verify the accuracy of mass loading data collected from the designated sample point.

Conducting Surveillance Monitoring

A surveillance point is selected "downstream" from the designated sample point, samples are collected and the data from the two sample points are compared.

Identifying Facilities

The Source Control Program compiles and maintains an annual surveillance list identifying facilities for possible surveillance. The criteria used to generate this list include:

- Pollutant(s) of concern impacting the Plant
- Loading by the IU for a pollutant of concern
- History of violation
- Informant information
- Adequacy of pretreatment
- On-site indicators of dumping or bypass.

It is important that companies understand that a business can be subject to surveillance monitoring at any time.

Triggering Violations

Two reasons generally contribute to higher concentrations or loadings at surveillance sample points: human errors and technical problems.

Human Errors

- Poor communication and scheduling between the waste generators (production, maintenance and custodial staff) and the treatment staff.
- Distracted staff or a system with inadequate oversight, leading to patterns of high pollutant levels at shift changes and breaks.
- Failure to instill and enforce operating procedures and best management practices, leading to errors such as washing parts in the wrong sink.
- Failing to examine sample data for trends, leading to poor scheduling of staffing and equipment maintenance.

Technical Problems

- Relying on in-house testing that does not account for particulate matter. Test kits, spectrophotometers and strips may not be as accurate as samples which are "digested" (solid matter dissolved by acid and heat) when particulates are present.
- Sample boxes often allow settled particulate matter to escape. High flows that "stir" the contents of the box can produce particulates detectable by surveillance monitoring.
- Discharge of particulates and polymers can also lead to a build-up of pollutant-solids in the sewer lateral, where high flows can dislodge the material.
- Undetected plumbing errors (lab sink bypassing treatment) or leaks (leaking ball-joints or gaskets short-circuiting a recirculation loop) can lead to violations.
- Treatment systems are rated in gallons per minute. An exceedance of this rate can result in a violation.

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RE-CHECK YOUR ASSUMPTIONS

- ***Check in-house test results against certified lab results***
- ***Check plumbing lines for errors***
- ***Periodically train and quiz staff on proper procedures***
- ***Sample during times of peak flow or concentration***
- ***Examine your data for trends***

Consequences

Sampling results obtained by surveillance monitoring are used for compliance purposes. Consequences for non-compliance can include:

- Notice of Violation
- Administrative Citation and fines
- Civil penalties
- Incarceration
- Loss of Federal contracts
- Termination of service
- Sewer surcharges

Preventing Violations

- Check in-house test results, using water collected at the same time, against results from a certified lab. Do this multiple times. If there isn't a clear relationship between the data sets, be cautious in relying on in-house testing.
- Sample other plumbing lines from the facility at cleanouts, by composite sampling if possible, to confirm that no plumbing errors exist.
- Consider dye testing or having a plumber check with a remote camera if you can't verify that plumbing under a slab goes to the appropriate location.
- Do not rely exclusively on new employee orientations and one-time training. Provide ongoing training and periodically quiz employees, contractors, and their managers on proper procedures. For example, sometimes custodial staff can cause a violation by using the wrong sink.
- Sample when system effectiveness may be compromised, such as during start-up, shut-down, meal breaks, shift changes, before/after filters are changed or clarifier sludge is pumped down, at times of peak production loadings, etc. Fancy equipment is not needed, your own sampler or a metering pump will suffice to generate composite samples.
- Examine your data for trends. Consider entering your monitoring data on computer spreadsheets to easily graph trends.

Staying Vigilant

This partial list of causes and preventive measures does not apply to all sites. However, in our experience, complacency, excessive pollutant loadings, and discharge violations are related. Dischargers who actively teach and monitor staff practices are less likely to have violations.

If you have questions about routine or surveillance monitoring, please contact your inspector or the Source Control Program at **(408) 945-3000**.

Current as of 2005.

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In accordance with the Americans with Disabilities Act, City of San José Environmental Services Department materials can be made available upon request in alternative formats, such as Braille, large print, audio tape, or computer disk. Requests may be made by calling (408) 945-3000 (Voice) or (800) 735-2929 (CRS).

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